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Please find below and/or attached an Office communication concerning this application or proceeding.

The time period for reply, if any, is set in the attached communication.

Office Action Summary

Application No.

10/686,462

Applicant(s)

DONOHO ET AL.

Examiner

EDWARD CHANG

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-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --
Period for Reply

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE 3 MONTH(S) OR THIRTY (30) DAYS, WHICHEVER IS LONGER, FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133). Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

Status

- 1) ☒ Responsive to communication(s) filed on 15 October 2003.
- 2a) ☐ This action is **FINAL**. 2b) ☒ This action is non-final.
- 3) ☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

Disposition of Claims

- 4) ☒ Claim(s) 1-41 is/are pending in the application.
- 4a) Of the above claim(s) _____ is/are withdrawn from consideration.
- 5) ☐ Claim(s) _____ is/are allowed.
- 6) ☒ Claim(s) 1-41 is/are rejected.
- 7) ☐ Claim(s) _____ is/are objected to.
- 8) ☐ Claim(s) _____ are subject to restriction and/or election requirement.

Application Papers

- 9) ☐ The specification is objected to by the Examiner.
- 10) ☒ The drawing(s) filed on 15 October 2003 is/are: a) ☒ accepted or b) ☐ objected to by the Examiner.
- Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).
- Replacement drawing sheet(s) including the correction is required if the drawing(s) is objected to. See 37 CFR 1.121(d).
- 11) ☐ The oath or declaration is objected to by the Examiner. Note the attached Office Action or form PTO-152.

Priority under 35 U.S.C. § 119

- 12) ☐ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).
- a) ☐ All b) ☐ Some * c) ☐ None of:
1. ☐ Certified copies of the priority documents have been received.
 2. ☐ Certified copies of the priority documents have been received in Application No. _____.
 3. ☐ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).

* See the attached detailed Office action for a list of the certified copies not received.

Attachment(s)

- 1) ☒ Notice of References Cited (PTO-892)
- 2) ☒ Notice of Draftperson's Patent Drawing Review (PTO-948)
- 3) ☒ Information Disclosure Statement(s) (PTO-8508)
- 4) ☐ Interview Summary (PTO-413)
- 5) ☐ Notice of Informal Patent Application
- 6) ☐ Other: _____
- Paper No(s)/Mail Date See Continuation Sheet

Continuation of Attachment(s) 3). Information Disclosure Statement(s) (PTO/SB/08), Paper No(s)/Mail Date :10/15/2003, 01/09/2004, and 02/24/2006 .

DETAILED ACTION

Status of Claims

1. This action is in reply to the application filed on 15th of October 2003.
2. Claims 1-41 are currently pending and have been examined.

Information Disclosure Statement

3. The Information Disclosure Statements filed on 10/15/2003, 01/09/2004, and 02/24/2006 have been considered. Initialed copies of the Form 1449 are enclosed herewith.

Claim Objections

4. Claim 29 is objected to because of the following informalities: the claim 29 reads, "...*applying an advance scenario to the events and entities in the dataset to detect...*" It is unclear if *the events and entities* are **in** the dataset, or applying it **on** the dataset. Appropriate correction is required. For this office action, examiner will assume the applicant meant to use "**on**" instead of "**in**" in claim 29.

Claim Rejections - 35 USC § 112

5. The following is a quotation of the first paragraph of 35 U.S.C. 112:

The specification shall contain a written description of the invention, and of the manner and process of making and using it, in such full, clear, concise, and exact terms as to enable any person skilled in the art to which it pertains, or with which it is most nearly connected, to make and use the same and shall set forth the best mode contemplated by the inventor of carrying out his invention.

6. Claim 7 is rejected under 35 U.S.C. 112, first paragraph, as failing to comply with the written description requirement. The claim(s) contains subject matter which was not described in the specification in such a way as to reasonably convey to one skilled in the relevant art that the inventor(s), at the time the application was filed, had possession of the claimed invention. The term "*neural networks*"

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was never defined in the specification. For the purpose of this examination, the examiner will assume that it is referring to any artificial intelligence (AI).

7. The following is a quotation of the second paragraph of 35 U.S.C. 112:

The specification shall conclude with one or more claims particularly pointing out and distinctly claiming the subject matter which the applicant regards as his invention.

8. Claims 31 is rejected under 35 U.S.C. 112, second paragraph, as being indefinite for failing to particularly point out and distinctly claim the subject matter which applicant regards as the invention. The limitation *...generate an alert if...* is vague and indefinite because it is not clear how the claim is bounded. What happens when undesired behavior is not identified? Please change the wording of the claim.

9. Claim 31 recite the limitation "*...the generating step...*" There is insufficient antecedent basis for this limitation in the claim.

10. Claim 36 recite the limitation "*...the time...*" There is insufficient antecedent basis for this limitation in the claim.

11. Claim 37 recite the limitation "*...the frequency...*" There is insufficient antecedent basis for this limitation in the claim.

Claim Rejections - 35 USC § 101

12. 35 U.S.C. 101 reads as follows:

Whoever invents or discovers any new and useful process, machine, manufacture, or composition of matter, or any new and useful improvement thereof, may obtain a patent therefor, subject to the conditions and requirements of this title.

13. Claims 1-24 and 32 are rejected under 35 U.S.C. 101 because the claimed invention is directed to non-statutory subject matter. The only independent claim is an abstract idea; therefore it is

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only a judicial exception, not being one of the statutory categories. These claims don't produce and useful and tangible result.

Claim Rejections - 35 USC § 102

14. The following is a quotation of the appropriate paragraphs of 35 U.S.C. 102 that form the basis for the rejections under this section made in this Office action:

A person shall be entitled to a patent unless –

(e) the invention was described in (1) an application for patent, published under section 122(b), by another filed in the United States before the invention by the applicant for patent or (2) a patent granted on an application for patent by another filed in the United States before the invention by the applicant for patent, except that an international application filed under the treaty defined in section 351(a) shall have the effects for purposes of this subsection of an application filed in the United States only if the international application designated the United States and was published under Article 21(2) of such treaty in the English language.

Examiner's Note: The Examiner has pointed out particular references contained in the prior art of record within the body of this action for the convenience of the Applicant. Although the specified citations are representative of the teachings in the art and are applied to the specific limitations within the individual claim, other passages and figures may apply. Applicant, in preparing the response, should consider fully the entire reference as potentially teaching all or part of the claimed invention, as well as the context of the passage as taught by the prior art or disclosed by the Examiner.

15. Claim 1 is rejected under 35 U.S.C. 102(b) as being anticipated by Anderson (US 6,064,985).

As per Claim 1: (102)

Anderson as shown discloses the following limitations:

- *a software program that facilitates the creation of an asset allocation for one or more accounts;* (See at least Column 1, Line 38+, "...which one or more portfolios are managed..."); (Also see at least Fig. 5, 6, computer screen shot of the software)

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- *creation of one or more portfolio templates that can then be used to create customized portfolios for each client;* (See at least Fig. 5, shows the template)
- *a portfolio template for individual securities and allocation percentages assigned to them;* (See at least Fig. 5)
- *the use of a prediction value for the expected growth rate of various markets;* (See at least Column 17, Line 62+, "...growth profile...", growth profile = growth prediction)
- *assignment of risk variables to each real investment;* (See at least Column 2, Line 56+, "...at risk value of the portfolio is determined...")
- *creation of a target portfolio and an actual portfolio;* (See at least Column 18, Line 36+, "...total value of the portfolio...evaluated...to comply with the investor's goals...", total value = actual portfolio, target portfolio = goals)
- *computation of an expected growth rate for each real investment, said target portfolio, and actual portfolio, with respect to the said risk variables;* (See at least Column 7, Line 47+, "...lists parameter calculations of the current state of the portfolio next to the percentage goal for particular parameter...")
- *upon sale of a real investment in the actual portfolio, the proceeds are moved into a cash or a money market;* (See at least Column 3, Line 11+, "...Funds are kept in reserve in other systems...", Fund = Cash)
- *once there is excess cash available within an account, the system compares the target portfolio to the actual portfolio to determine which securities should be purchased, producing a target buy list.* (See at least Fig. 2A, Items 54, 58, 68, 70, and 69)

As per Claim 3:

Anderson discloses the limitations as shown in the rejections above. Furthermore, Anderson also discloses the following limitations:

- *use of a prediction value for the expected growth rate of various markets further comprises predictions of the expected growth rate for classes of real investments and*

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even assignments of an expected growth rate to an individual security; (See at least Column 17, Line 62+, "...growth profile...", growth profile = growth prediction of individual securities)

As per Claim 12:

Anderson as shown discloses the following limitations:

- *two or more actual client portfolios; (See at least Column 1, Line 38+, "...which one or more portfolios are managed...")*
- *each said actual client portfolios containing one or more actual securities; (See at least Column 2, Line 7+, "...The investment portfolio contains share of stock...")*
- *each of said actual client portfolios assigned a desired target portfolio with respect to desired securities and percentages; (See at least Column 2, Line 14+, "...The goals for a particular portfolio are decided upon...with each stock making up a certain percentage of the index...", goals = desired target)*
- *each of said actual client portfolios having a pre-defined strategy for buy and selling security to transition for the actual client portfolio security distribution to a desired target portfolio; (See at least Fig. 2A, shows the strategy when to buy and sell to maximize profit)*
- *each said actual securities and desired securities assigned a tolerance which if breached provides an alert wherein an automated buy or sell can be performed with respect to said pre-defined strategy. (See at least Fig. 2A, if certain stocks don't meet the criteria, the system provides the alert to move the stocks to List 2 for selling. If it meets the criteria, the stocks are moved to List 1 for buying)*

Claim Rejections - 35 USC § 103

16. The following is a quotation of 35 U.S.C. 103(a) which forms the basis for all obviousness rejections set forth in this Office action:

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(a) A patent may not be obtained though the invention is not identically disclosed or described as set forth in section 102 of this title, if the differences between the subject matter sought to be patented and the prior art are such that the subject matter as a whole would have been obvious at the time the invention was made to a person having ordinary skill in the art to which said subject matter pertains. Patentability shall not be negated by the manner in which the invention was made.

17. The factual inquiries set forth in *Graham v. John Deere Co.*, 383 U.S. 1, 148 USPQ 459 (1966), that are applied for establishing a background for determining obviousness under 35 U.S.C. 103(a) are summarized as follows:

1. Determining the scope and contents of the prior art.
2. Ascertaining the differences between the prior art and the claims at issue.
3. Resolving the level of ordinary skill in the pertinent art.
4. Considering objective evidence present in the application indicating obviousness or nonobviousness.

Examiner's Note: The Examiner has pointed out particular references contained in the prior art of record within the body of this action for the convenience of the Applicant. Although the specified citations are representative of the teachings in the art and are applied to the specific limitations within the individual claim, other passages and figures may apply. Applicant, in preparing the response, should consider fully the entire reference as potentially teaching all or part of the claimed invention, as well as the context of the passage as taught by the prior art or disclosed by the Examiner.

18. Claims 2~16 are rejected under 35 U.S.C. 103 (a) as being unpatentable over Anderson in view of Bunda (US 2003/0065598 A1).

As per Claim 2:

Anderson discloses the limitations as shown in the rejections above. However, Anderson does not disclose the following limitation. But, Bunda discloses the following limitations:

- *sell trigger module which involves the use any number of protection levels per real investment, some of which may adjust based on the current share price, that allows for a*

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real investment to be liquidated over time as opposed to all at once and is completely adjustable based on the risk tolerance of the client; (See at least Fig. 4, Trailing Stop, Stop Loss = Sell triggers with protection levels, Shares(415) = number of shares to sell)

As per Claim 4:

Anderson discloses the limitations as shown in the rejections above. However, Anderson does not disclose the following limitation. But, Bunda discloses the following limitations:

- *monitoring of protector levels of every investment for every account for every client in real-time and alerts the advisor when a tolerance is breached and action should be taken.* (See at least Page 5, Paragraph 0049+, "...notification may be sent to the trader if the trigger condition is met...")

As per Claim 6:

Anderson discloses the limitations as shown in the rejections above. However, Anderson does not disclose the following limitation. But, Bunda discloses the following limitations:

- *trailing stop loss set for each real investment of each account of each client monitoring the price movements of the real investment in real time which will automatically increase the trigger price of the trailing stop loss as the share price increases while also checking to see if the trailing stop loss trigger level has been breached and providing an alert if said trailing stop loss trigger level has been breached.* (See at least Page 5, Paragraph 0050+, "...if the check box associated with "Trailing Stop" field is checked...")

19. Claims 2~16 are rejected under 35 U.S.C. 103 (a) as being unpatentable over Anderson/Bunda in view of **Official Notice**.

As per Claim 5:

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Anderson discloses the limitations as shown in the rejections above. However, Anderson does not disclose the following limitation. But, Bunda discloses the following limitations:

- *multitude of stop-loss levels to be set for each security and a liquidation percentage assigned to each enabling the gradual reduction of investment in a security should it decline in value while allowing the partial participation in growth should the security being to appreciate.* (See at least Fig. 4, 415 (number of shares) = liquidation percentage)

Therefore, it would have been obvious to one of ordinary skill in the art at the time of the invention was made to modify the Anderson/Bunda's method/system for portfolio management to assign a stop loss level with liquidation percentage. This would help *"to limit or eliminate losses due to a position in a security by closing the position in the security"*. (See page 4, paragraph 0044)

Although it is inherent that if one stop loss is ordered, multiple stop loss orders can be ordered. However Bunda does not specifically disclose setting multiple stop loss levels with liquidation percentage assigned to each. But examiner takes **Official Notice** that is it old and well known in the finance art to place more then one order for each stock. An example of a single order is shown in Fig. 4. If the user makes two or more orders of the same stock, user can place different stop-loss levels for each order. Therefore, if the user decides to sell (triggered by stop loss alert), he would be only selling a portion of the total stock, enabling the gradual reduction of investment in a security.

20. Claim 7 is rejected under 35 U.S.C. 103 (a) as being unpatentable over Anderson/Bunda in view of Billings et al. (hereinafter "Billings"); (US 2002/0103742 A1).

As per Claim 7:

Combination of Anderson/Bunda discloses the limitations as shown in the rejections above. However, Anderson/Bunda does not disclose the following limitation. But, Billings discloses the following limitations:

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- *target growth rate is set for a real investment, class, category, account, and client level.*
(See at least Fig. 2g, target growth rate is "Break Point" divided by "Buy Price")
- *Said trigger levels are then dynamically adjusted in real-time based on the performance of said real investment, class, category, account, and client level relative to said target growth rates.* (See at least Page 3, Paragraph 0047+, "...stop loss percentage...allowing stock prices the freedom to increase in price...")

As per Claim 8:

Combination of Anderson/Bunda/Billings discloses the limitations as shown in the rejections above. Furthermore, Anderson also discloses the following limitations:

- *continual comparisons between the target portfolio and the client's actual portfolio to determine when there is excess cash available to invest and* (See at least Column 2, Line 36+, "...evaluates these selected stocks against the performance of other stocks...")
- *generate a list of securities and amounts for that account each day which should be purchased based on the differences between the actual and target portfolios is generated.* (See at least Column 2, Line 39+, "...Stocks which meet the required parameters are segregated into List 1 for eventual purchase...")

As per Claim 10:

Combination of Anderson/Bunda/Billings discloses the limitations as shown in the rejections above. Furthermore, Bunda also discloses the following limitations:

- *a data feed or other security pricing methods to continuously monitor the performance of every investment in every clients account and alerts the user if any investment fails to perform within its tolerances.* (See at least Page 5, Paragraph 0049+, "...notification may be sent to the trader if the trigger condition is met...")

As per Claim 11:

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Combination of Anderson/Bunda/Billings discloses the limitations as shown in the rejections above. Furthermore, Anderson also discloses the following limitations:

- *automated trading system that allows for a different combination of settings and technical indicators to be used to monitor different securities to determine when to buy and sell an investment.* (See at least Fig. 2A)

21. Claim 9 is rejected under 35 U.S.C. 103 (a) as being unpatentable over Anderson/Bunda/Billings in view of Kaplan (US 7,155,510 B1).

As per Claim 9:

Combination of Anderson/Bunda/Billings discloses the limitations as shown in the rejections above. However, Anderson/Bunda/Billings does not disclose the following limitation. But, Kaplan discloses the following limitations:

- *mathematical algorithm is used to determine and monitor the correlation between any mutual fund and an assigned index, is incorporated to predict where said mutual fund will close with respect to price, at the end of the day.* (See at least Column 5, Line 16+, "...The filtering and processing algorithms that receive as inputs the individual intelligence data and output the collective forecast are particularly important...")

As per Claim 15:

Combination of Anderson/Bunda discloses the limitations as shown in the rejections above. However, Anderson/Bunda does not disclose the following limitation. But, Kaplan discloses the following limitations:

- *actual security is a mutual fund, a prediction of a closing mutual fund price base on the real time price of a related index is used to determine is said price level will be breached.*

SAME AS CLAIM 15

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22. Claim 7 is rejected under 35 U.S.C. 103 (a) as being unpatentable over Anderson in view of Bunda.

As per Claim 13:

Anderson discloses the limitations as shown in the rejections above. However, Anderson does not disclose the following limitation. But, Bunda discloses the following limitations:

- *actual security is assigned a one or more static price levels that if breached will cause a corresponding percentage of said security to be sold.*

SAME AS CLAIM 5

As per Claim 14:

Anderson discloses the limitations as shown in the rejections above. However, Anderson does not disclose the following limitation. But, Bunda discloses the following limitations:

- *price levels are adjustable based on predetermined criteria.* (look for changing conditions)

As per Claim 16:

Anderson discloses the limitations as shown in the rejections above. However, Anderson does not disclose the following limitation. But, Bunda discloses the following limitations:

- *available cash is monitored and provides an alert when any one of said desired securities of said pre-defined strategy for buying securities has breached its threshold and can be purchased.* (See at least Fig. 9, Trailing Buy = pre-defined strategy for buying securities when threshold is breached.)

As per Claims 1 and 32:

Kaplan as shown discloses the following limitations:

- *retrieving an advanced scenario associated with a predetermined activity of one or more individuals, wherein the predetermined activity comprises an undesired behavior relating to securities trading; and* (See at least Column 4, Line 64+, "...gathering individual forecasts from a plurality individuals or other entities within a defined period of time...", individual forecasts= advanced scenario)
- *performing detection processing, using the advanced scenario, on a dataset to detect the situation, wherein the dataset includes a portion of the data having the second format, the dataset includes one or more events and entities, and* (See at least Column 5, Line 16+, "...the filtering and processing algorithms that receive as inputs the individual intelligence data...", processing algorithms= detection processing)
- *the situation is detected when the detection processing finds at least one instantiation of the undesired behavior.* (See at least Column 5, Line 17+, "...output the collective forecast are particularly important...", detecting an undesired behavior = forecasting)

Although it is inherent that receiving and transforming of the data is done in Kaplan's system/method for forecasting information. However Kaplan does not specifically disclose any receiving and manipulation of the data. But Smith discloses the following limitations.

- *receiving, on a periodic basis, data from at least one source, wherein the data has a first format;* (See at least Figure 5, Item 501)
- *transforming the data from the first format to a second format for analysis;* (See at least Figure 5, Item 502)
- *performing detection processing, using the advanced scenario, on a dataset to detect the situation, wherein the dataset includes a portion of the data having the second format, the dataset includes one or more events and entities, and* (See at least Figure 5, Item 502)

Therefore, it would have been obvious to one of ordinary skill in the art at the time of the invention was made to modify the Kaplan's method/system for forecasting information as taught by Smith's data health monitor to gather data and transform it to single data format. This would help analyzer of the data to quickly and efficiently manage data.

As per Claim 4:

Combination of Kaplan/Smith discloses the limitations as shown in the rejections above. Furthermore, Kaplan also discloses the following limitations:

- *performing rule-based analysis to identify at least one of the events and entities based on rules specifying parameters and thresholds for identification of a set of specified events and entities.* (See at least Column 5, Line 26+, "...algorithms, additional data...", algorithms = rule-based analysis)

As per Claim 5:

Combination of Kaplan/Smith discloses the limitations as shown in the rejections above. Furthermore, Kaplan also discloses the following limitations:

- *performing outlier detection analysis to identify at least one of the events and entities outside of a defined statistical range.* (See at least Column 4, Line 64+, "...gathering individual forecasts from a plurality individuals or other entities within a defined period of time...older individual forecasts may be discounted as a function of their age.", outlier detection analysis using time range)

As per Claim 6:

Combination of Kaplan/Smith discloses the limitations as shown in the rejections above. Furthermore, Kaplan also discloses the following limitations:

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- *processing includes performing decision tree analysis.* (See at least Column 5, Line 16+, "...filtering and processing algorithms...", filtering/processing algorithms = performing decision tree analysis)

As per Claim 7:

Combination of Kaplan/Smith discloses the limitations as shown in the rejections above.

Furthermore, Kaplan also discloses the following limitations:

- *processing includes using neural networks.* (See at least Column 14, Line 46+, "...processing algorithm for generating collective forecasts...", neural networks = Artificial Intelligence (AI) = processing algorithm)

As per Claims 25 and 33:

Combination of Kaplan/Smith discloses the limitations as shown in the rejections above.

Furthermore, Smith also discloses the following limitations:

- *generating one or more alerts based on one or more of the found instantiations of the undesired behavior.* (See at least Column 1, Line 13+, "...automatically alerts users at the client site...")

Therefore, it would have been obvious to one of ordinary skill in the art at the time of the invention was made to modify the Kaplan's method/system for forecasting information as taught by Smith's data health monitor to generate alerts when undesired behavior is detected. This would help the alerted investor to efficiently and effectively manage and utilize the result generated.

As per Claim 28:

Combination of Kaplan/Smith discloses the limitations as shown in the rejections above.

Furthermore, Kaplan also discloses the following limitations:

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- *prioritizing the groups, wherein the prioritizing is based on user defined logic and values.*
(See at least Column 1, Line 62+, "...sort through the information generated by the masses...", sorting = prioritizing, it is obvious that sorting is defined by logic and values)

As per Claims 26 and 34:

Combination of Kaplan/Smith discloses the limitations as shown in the rejections above. Furthermore, Kaplan also discloses the following limitations:

- *prioritizing the one or more found instantiations of undesired behaviors, wherein the prioritizing based on user defined logic and values; and* (See at least Column 1, Line 62+, "...sort through the information generated by the masses...", sorting=prioritizing, it is obvious that sorting is defined by logic and values)

However Kaplan does not specifically disclose following limitation. But Smith discloses the following limitations.

- *generating one or more alerts based on one or more of the found instantiations of the undesired behavior.* (See at least Column 1, Line 13+, "...automatically alerts users at the client site...")

Therefore, it would have been obvious to one of ordinary skill in the art at the time of the invention was made to modify the Kaplan's method/system for forecasting information as taught by Smith's data health monitor to gather data and transform it to generate alerts when undesired behavior is detected. This would help the investor to efficiently and effectively manage and utilize the result generated.

As per Claims 27 and 35:

Combination of Kaplan/Smith discloses the limitations as shown in the rejections above. Furthermore, Kaplan also discloses the following limitations:

- *grouping the one or more found instantiations of undesired behavior, wherein the grouping is based on focus and user defined logic;* (See at least Column 1, Line 62+,

"...sort through the information generated by the masses...", grouping = sorting, it is obvious that sorting is defined by logic and values)

However Kaplan does not specifically disclose following limitation. But Smith discloses the following limitations.

- *generating one or more alerts based on one or more of the prioritized instantiations of the undesired behavior.* (See at least Column 1, Line 13+, "...automatically alerts users at the client site...")

Therefore, it would have been obvious to one of ordinary skill in the art at the time of the invention was made to modify the Kaplan's method/system for forecasting information as taught by Smith's data health monitor to gather data and transform it to generate alerts when undesired behavior is detected. This would help the investor to efficiently and effectively manage and utilize the result generated.

As per Claim 28:

Combination of Kaplan/Smith discloses the limitations as shown in the rejections above. Furthermore, Kaplan also discloses the following limitations:

- *prioritizing the groups, wherein the prioritizing is based on user defined logic and values.* (See at least Column 1, Line 62+, "...sort through the information generated by the masses...", sorting = prioritizing, it is obvious that sorting is defined by logic and values)

As per Claim 29:

Combination of Kaplan/Smith discloses the limitations as shown in the rejections above. Furthermore, Kaplan also discloses the following limitations:

- *selecting a dataset from the data having the second format, wherein the dataset includes one or more events relating to securities trading and one or more entities involved in securities trading.* (See at least Column 5, Line 17+, "...output the collective forecast are particularly important...")

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- *applying an advanced scenario to the events and entities in the dataset to detect an undesired behavior by one or more of the entities;* (See at least Column 5, Line 16+, "...the filtering and processing algorithms that receive as inputs the individual intelligence data...", individual intelligence data= advance scenario, detecting an undesired behavior = forecasting)

Although it is inherent that receiving and transforming of the data is done in Kaplan's system/method for forecasting information. However Kaplan does not specifically disclose any receiving, alerting, and manipulation of the data. But Smith discloses the following limitations.

- *receiving, on a periodic basis, data having a first format;* (See at least Figure 5, Item 501)
- *transforming the data from the first format to a second format;* (See at least Figure 5, Item 502)
- ***generating an alert when the undesired behavior is detected.*** (See at least Column 1, Line 13+, "...automatically alerts users at the client site...")

Therefore, it would have been obvious to one of ordinary skill in the art at the time of the invention was made to modify the Kaplan's method/system for forecasting information as taught by Smith's data health monitor to gather/transform data into single data format and generate an alert when undesired behavior is detected. This would help "alerted" analyzer of the data to quickly and efficiently manage data, and avoid taking unnecessary risk.

As per Claim 30:

Combination of Kaplan/Smith discloses the limitations as shown in the rejections above. Furthermore, Kaplan also discloses the following limitations:

- *using one or more of sequence matching, link analysis, rule-based analysis, outlier detection analysis and decision tree analysis.*

For the above limitation, please refer back to claims 2, 3, 4, 5, and 6.

As per Claim 40:

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Combination of Kaplan/Smith discloses the limitations as shown in the rejections above.

Furthermore, Kaplan also discloses the following limitations:

- *to permit an administrator to remove scenarios.*

(See at least Column 15, Line 19+, "...is filtered to remove information from people...", does not specifically say "administrator", but it is obvious administrative entity is filtering the information)

23. Claims 2, 3 are rejected under 35 U.S.C. 103 (a) as being unpatentable over Kaplan/Smith in further view of Stoker et al. (Hereinafter "Stoker"); (US 2004/0162742 A1)

As per Claim 2:

Combination of Kaplan/Smith discloses the limitations as shown in the rejections above.

However Kaplan/Smith does not specifically disclose the following limitations. But Stoker discloses the following limitations:

- *performing sequence matching to identify sequences in one or more events and relate those sequences to one or more entities in the dataset.* (See at least Page 1, Paragraph 0008, "...determining if primary data matches previously stored data...")

Therefore, it would have been obvious to one of ordinary skill in the art at the time of the invention was made to modify the Kaplan/Smith's method/system as taught by Stoker's data integration method to identify similar sequences in a given dataset. This commonly done data matching will help the user to identify similar datasets and help search them more efficiently and effectively.

As per Claim 3:

Combination of Kaplan/Smith discloses the limitations as shown in the rejections above.

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However Kaplan/Smith does not specifically disclose the following limitations. But Stoker discloses the following limitations:

- *performing link analysis to establish connections between one or more entities and events in the dataset.* (See at least Page 1, Paragraph 0008, "...corporate linkage (i.e., checking for affiliations between companies...")

Therefore, it would have been obvious to one of ordinary skill in the art at the time of the invention was made to modify the Kaplan/Smith's method/system as taught by Stoker's data integration method to perform link analysis to establish connections between datasets. This commonly done data linking will help the user to identify similar datasets and link them together to efficiently and effectively manage the database.

24. Claims 8~24 are rejected under 35 U.S.C. 103 (a) as being unpatentable over Kaplan/Smith in further view of **Official Notice**.

As per Claims 8~24:

Combination of Kaplan/Smith discloses the limitations as shown in the rejections above. However Kaplan/Smith does not specifically disclose the following limitations. But examiner takes **Official Notice** that it is old and well known in the finance art to consider these following behaviors as irregular behaviors or improper behaviors.

- *Holding concentrated position in a single security.*
- *Holding a concentrated position in low-priced securities*
- *Abusing auto-execution systems;*
- *Marking the close* (Attempting to influence the closing price of a stock by executing purchase or sale orders at or near the close of the market.)
- *Making improper short sales*
- *Making cross-trades away from the market (buy and sell stocks without recording the trade by the broker managing both portfolios)*

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- *Behaviors of interest include encouraging orders but marking them as unsolicited*
- *Encouraging short-term holding*
- *Soliciting orders but marking them as unsolicited*
- *Shadowing a customer's account*
- *Front-running*
- *Trading on insider information*
- *Making large deposits*
- *Rapid switching of mutual funds*
- *Disproportionate allocation of IPO shares*
- *Unfair allocation of block trades to subaccounts of the investment advisor*
- *Maintenance of concentrated positions in a subaccount of the investment advisor*

In addition, examiner also takes **Official Notice** that it is old and well known in the computer art to predefine some dataset (conditions) to go along with the irregular behaviors.

- *The dataset includes....*

Therefore, it would have been obvious to one of ordinary skill in the art at the time of the invention was made to modify the Kaplan/Smith's method/system to predefine irregular behaviors activities and the input dataset. These commonly known irregular behaviors are the behaviors that should be avoided to lessen the risk for the investors.

25. Claims 31, 36~39, and 41 are rejected under 35 U.S.C. 103 (a) as being unpatentable over Kaplan/Smith in further view of Bosworth-Davies et al. (Hereinafter "Bosworth"); (US 2003/0033228 A1).

As per Claim 31:

Combination of Kaplan/Smith discloses the limitations as shown in the rejections above. Furthermore, Kapan also discloses the following limitations:

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- *prioritizing the detected undesired behavior.* (See at least Column 1, Line 62+, "...sort through the information generated by the masses...", sorting=prioritizing, it is obvious that sorting is defined by logic and values)

However Kaplan/Smith does not specifically disclose the following limitation. But Bosworth discloses the following limitations.

- *generating step only generates an alert if an undesired behavior having a predetermined priority is identified.* (See at least Page 2, Paragraph 0034+, "...score based on application of the rules that places them in the category of being worthy of alerting as potentially suspicious events...", score = priority)

Therefore, it would have been obvious to one of ordinary skill in the art at the time of the invention was made to modify the Kaplan/Smith's method/system as taught by Bosworth's countermeasures for irregularities in financial transactions to only generate an alert that has a priority (numerical value) for each focal entities. This would help the system to ignore unimportant focal entities and effectively focus in on the focal entities with "high priority".

As per Claim 36:

Combination of Kaplan/Smith discloses the limitations as shown in the rejections above.

However Kaplan/Smith does not specifically disclose the following limitations. But Bosworth discloses the following limitations:

- *to permit an administrator to adjust the time at which detection processing occurs.* (See at least Page 7, Paragraph 0085+, "...time periods established by the system administrator...")

Therefore, it would have been obvious to one of ordinary skill in the art at the time of the invention was made to modify the Kaplan/Smith's method/system as taught by Bosworth's countermeasures for irregularities in financial transactions to permit an administrator to adjust the time at which detection processing occurs. This would give more control to the administrator to efficiently and effectively manage the detection processing system.

As per Claim 37:

Combination of Kaplan/Smith discloses the limitations as shown in the rejections above.

However Kaplan/Smith does not specifically disclose the following limitations. But Bosworth discloses the following limitations:

- *to permit an administrator to adjust the frequency at which detection processing occurs.*
(See at least Page 3, Paragraph 0034+, "...Setting the weights, thresholds and limits is an input...", limits = frequency)

Therefore, it would have been obvious to one of ordinary skill in the art at the time of the invention was made to modify the Kaplan/Smith's method/system as taught by Bosworth's countermeasures for irregularities in financial transactions to permit an administrator to adjust the frequency at which detection processing occurs. This would give more control to the administrator to efficiently and effectively manage the detection processing system.

As per Claim 38:

Combination of Kaplan/Smith discloses the limitations as shown in the rejections above.

However Kaplan/Smith does not specifically disclose the following limitations. But Bosworth discloses the following limitations:

- *to permit an administrator to modify parameters of the advanced scenario.*
(See at least Page 7, Paragraph 0085+, "...rules are defined by parameters of amount thresholds and time periods...")

Therefore, it would have been obvious to one of ordinary skill in the art at the time of the invention was made to modify the Kaplan/Smith's method/system as taught by Bosworth's countermeasures for irregularities in financial transactions to permit an administrator to modify parameters of the advanced scenario. This would give more control to the administrator to efficiently and effectively manage the detection processing system.

As per Claim 39:

Combination of Kaplan/Smith discloses the limitations as shown in the rejections above.

However Kaplan/Smith does not specifically disclose the following limitations. But Bosworth discloses the following limitations:

- *to permit an administrator to request retrieval of additional scenarios.*

(See at least Column 9, Line 23+, "...institution itself is able to choose the rules it applies to the various categories of account by the way of the system administrator...", rules = scenarios, various categories of account = dataset)

Therefore, it would have been obvious to one of ordinary skill in the art at the time of the invention was made to modify the Kaplan/Smith's method/system as taught by Bosworth's countermeasures for irregularities in financial transactions to permit an administrator to request retrieval of additional scenarios. This would give more control to the administrator to efficiently and effectively manage the detection processing system.

As per Claim 41:

Combination of Kaplan/Smith discloses the limitations as shown in the rejections above.

However Kaplan/Smith does not specifically disclose the following limitations. But Bosworth discloses the following limitations:

- *to permit an administrator to assign a trust level to focal entities; and wherein focal entities with a minimum trust level are excluded from alerts.* (See at least Page 3, Paragraph 0037+, "...rules with separate numerical outcomes the system administrator is able to maintain...", minimum trust level = numerical outcomes); (Also see at least Page 2, Paragraph 0034+, "...score based on application of the rules that places them in the category of being worthy of alerting as potentially suspicious events...")

Therefore, it would have been obvious to one of ordinary skill in the art at the time of the invention was made to modify the Kaplan/Smith's method/system as taught by Bosworth's countermeasures for irregularities in financial transactions to assign a trust level (numerical value)

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for each focal entities. This would help the system to ignore unimportant focal entities and effectively focus in on the focal entities with "high trust level".

Conclusion

Any inquiry of a general nature or relating to the status of this application or concerning this communication or earlier communications from the Examiner should be directed to **Edward Chang** whose telephone number is **571.570.3092**. The Examiner can normally be reached on Monday-Friday, 9:30am-5:00pm. If attempts to reach the examiner by telephone are unsuccessful, the Examiner's supervisor, **James A. Reagan** can be reached at **571.272.6710**.

Information regarding the status of an application may be obtained from the Patent Application Information Retrieval (PAIR) system. Status information for published applications may be obtained from either Private PAIR or Public PAIR. Status information for unpublished applications is available through Private PAIR only. For more information about the PAIR system, see <http://portal.uspto.gov/external/portal/pair> <<http://pair-direct.uspto.gov>>. Should you have questions on access to the Private PAIR system, contact the Electronic Business Center (EBC) at **866.217.9197** (toll-free).

Any response to this action should be mailed to:

Commissioner of Patents and Trademarks

Washington, D.C. 20231

or faxed to **571-273-8300**.

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Hand delivered responses should be brought to the **United States Patent and Trademark Office Customer Service Window:**

Randolph Building

401 Dulany Street

Alexandria, VA 22314.

April 15, 2008

/Edward Chang/ Examiner, Art Unit 4143